

GARMENT HANGER

The present application claims priority from provisional application Ser. No. 60/411,139, filed Sept. 16, 2002, which is herein incorporated by reference in its entirety.

TECHNICAL FIELD AND BACKGROUND OF THE INVENTION

5 The present invention is generally directed to a garment hanger and, more particularly, to a garment hanger that is especially suitable for use in a vehicle, including a recreational vehicle, such as a motor home or a boat, in which the support rod or bar on which the hanger is mounted or the garment suspended on the hanger may be subjected to tilting and/or vibration.

10 Garment hangers typically comprise a hook portion with a pair of angled arms that extend in opposite directions from the hook portion. The arms are adapted to support, for example, the shoulder portions of a garment, such as a shirt, jacket, or the like. The arms are typically interconnected at their ends by a transverse rod or bar that is adapted to support or retain, for example, trousers thereon and/or may include clips mounted thereon for supporting 15 a skirt, pants, or the like. The hook portion is typically C-shaped with an open section for hooking onto the support bar or rod to suspend the hanger and, therefore, the respective garment from the support rod or bar. However, when such hangers are mounted on support rods or bars in vehicles, in which the support bar and/or the garment may be subjected to vibration and/or tilting due to the motion of the vehicle, the hook portion commonly becomes 20 disengaged from the support rod allowing the garment to fall onto the floor of the vehicle; thus, permitting the garment to become wrinkled.

Accordingly, there is a need for a garment hanger that will minimize disengagement of the hanger from a support bar in the event that the support bar and/or garment is subject to vibration or tilting.

25 SUMMARY OF THE INVENTION

Accordingly, the present invention provides a garment hanger that is adapted to engage a support bar in a manner to minimize disengagement of the hanger from the support bar in the event that the support bar or garment suspended by the hanger is subject to vibration and/or tilting or the like. Furthermore, the garment hanger is adapted to provide 30 easy engagement with and disengagement from the support bar.

In one form of the invention, the garment hanger includes a hook portion and first and second arms, which extend outwardly from the hook portion for supporting an article of clothing on the garment hanger. The hook portion has a generally C-shaped portion with an open side for receiving a support bar therein. In addition, the hook portion is adapted 5 to releasably engage the support bar to be retained on the support bar even when the garment hanger is subject to vibration or tilting or movement relative to the support bar.

In one aspect, the first and second arms are angled downwardly with respect to the hook portion.

In other aspects, the hook portion and the first and second arms are formed 10 from a wire member. For example, the wire member may have a generally uniform thickness. In addition, the wire member preferably comprises a plastic wire member.

According to yet other aspects, each of the first and second arms includes a recessed portion for receiving a strap of a garment. In a further aspect, each of the first and second arms includes a raised shoulder to provide lateral support to a garment hanging on the 15 first and second arms. Optionally, the recessed portions may be located adjacent to the raised shoulders.

According to yet another form of the invention, a garment hanger includes a hook portion for engaging a support bar and first and second arms, which extend outwardly and downwardly from the hook portion. Each of the first and second arms has a support 20 surface for hanging a garment on the first and second arms. The hook portion includes a spring for releasably engaging the support bar whereby the hanger is retained on the support bar even when the garment hanger is subject to vibration or tilting or movement relative to the support bar. In one aspect, at least one of the first and second arms includes a raised shoulder, which forms a lateral support for a garment hanging on the respective arm.

25 Preferably, each of the first and second arms includes a raised shoulder. In a further aspect, each of the arms includes a recess for receiving a strap of a garment.

According to yet another aspect, the hook portion has a generally C-shaped portion with an open side for receiving a support bar. For example, the hook portion may further include an engagement arm, which opens the open side further for receiving a support 30 bar having a greater dimension than the dimension of the open side wherein the support bar is releasably captured in the C-shaped portion when the hook portion is mounted on the support bar. For example, the engagement bar may include a cam surface for engaging the support bar when the garment hanger is mounted on the support bar wherein the camming surface

urges the open side to open further when the hook portion is urged into engagement with the support bar.

Accordingly, the present invention provides a simple garment hanger that releasably engages a support bar in a manner to minimize disengagement of the hanger with 5 the support bar in the event that the support bar or the garment suspended by the hanger is subject to vibration and/or tilting or the like.

These and other objects, advantages, purposes, and features of the invention will become more apparent from the study of the following description taken in conjunction with the drawings.

10 **DETAILED DESCRIPTION OF THE DRAWINGS**

FIG. 1 is an elevation view of one side of the garment hanger of the present invention;

FIG. 2 is an elevation view of the other side of the garment hanger of FIG. 1;

FIG. 3 is a top plan view of the garment hanger of FIG. 1;

15 FIG. 4 is a bottom plan view of the garment hanger of FIG. 1;

FIG. 5 is a right side elevation view of the garment hanger of FIG. 1;

FIG. 6 is a left side elevation view of the garment hanger of FIG. 1;

FIG. 7 is a cross-section taken along line VII-VII of FIG. 1;

20 FIG. 8 is a similar view to FIG. 1 illustrating the hanger being placed on a support rod to illustrate the movement of the hook portion of the garment hanger; and

FIG. 9 is an elevation view of another embodiment of a garment hanger of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, the numeral 10 generally designates a garment hanger of 25 the present invention. Garment hanger 10 includes a hook portion 12, which is adapted to releasably engage a support bar or rod, as will be more fully described below, and a pair of outwardly extending arms 14 and 16. Arms 14 and 16 are angled downwardly with respect to hook portion 12 and provide support surfaces for a garment, such as the shoulder portions of a garment. In addition, arms 14 and 16 are interconnected at their distal ends by a crossbar 30 18, which provides a support surface for folded trousers or other articles of clothing or the like.

Hook portion 12 includes a generally C-shaped portion 20, which includes an open side 21, and a mounting arm 22. Mounting arm 22 is adapted to open side 21 further to

allow a support rod or bar to move into the inner portion or space 20a of C-shaped portion 20 and, further, return the open side to its original rested state when the support bar or rod is positioned in inner portion 20a of C-shaped portion to thereby releasably retain hook portion 12 on the support bar.

5 As best seen in FIGS. 1 and 2, mounting arm 22 includes an angled portion 24 that provides a cam surface 25. As will be more fully understood in reference to FIG. 8, when mounting hook portion 12 is mounted on a support rod or bar, mounting arm 22 makes initial contact with the support arm or bar B, which typically has a dimension D1 of a range of about 1 to 2 inches, for example. Preferably, C-shaped portion 20 includes an inner
10 diameter D2 which is substantially equal to diameter D1 of support bar B. Furthermore, the distance between the lower surface of mounting arm 22 and upper surface 26 of base 27 of hook portion 12 D3 is less than the dimension D1 of support bar B. When mounting arm 22 makes initial contact with support bar B, the person placing garment hanger 10 onto support bar B applies a force generally in the direction of the arrow indicated at 28 in FIG. 2, which
15 urges cam surface 25 to engage support bar B. Cam surface 25 translates the applied force into a lifting force to lift mounting arm 22 to thereby open open side 21 and increase the space between mounting arm 22 and upper surface 26 to increase distance D3 to permit the support bar B to pass into inner portion or space 20a defined by C-shaped section 20. As a result, mounting arm 22 forms a spring. In this manner, when support bar B is positioned in
20 space 20a, mounting arm 22 will at least partially and more preferably substantially return to its initial rested state until an equal and opposite force is applied to garment hanger 10 to disengage hook portion 12 from the respective support bar. Preferably, garment hanger 10 is formed from a low-friction material, such as a plastic, including a high-density polyethylene or the like, or may be formed from a metal material, such as stainless steel or the like.

25 Referring again to FIG. 1, hook portion 12 includes an inverted U-shaped base 32 that mounts hook portion 12 to arms 14 and 16. U-shaped portion 32 provides stiffness to upper surface 26 and substantially retains upper surface 26 stationary relative to mounting arm 22 so that when hook portion is urged into engagement with support bar B, only the upper portion of the C-shaped portion deflects (see FIG. 8).

30 In the illustrated embodiment, garment hanger 10 is formed from a wire member 34 that has a generally uniform cross-section; however, it can be appreciated that wire member 34 may have a varying cross-section to provide increased or decreased stiffness where desired. Referring to FIG. 7, wire member 34 has an elongate rounded cross-section

with rounded upper and lower surfaces and generally planar sides that interconnect the upper and lower surfaces. As used herein, the reference to wire member generally refers to an elongate unitary member. Though it can be appreciated that hanger 10 may be formed from other members and may be formed by molding, such as injection molding. Also, it should be
5 understood that hanger 10 may be formed from a composite material or a coated material, for example, two plastics—one providing or forming a base member, and the other forming a softer outer shell. In addition, noted above, hanger 10 may be formed from a metal wire or the like.

To provide increased retention of the respective garment on garment hanger
10 10, arms 14 and 16 optionally include raised shoulders 36 and 38, which have outer surfaces 36a and 38a that are elevated a distance D4, D5 above the support surfaces 14b, 16b of support arms 14 and 16. In this manner, when a garment is hung on the garment hanger 10, at least portions of the garment will be retained on surfaces 14b and 16b by abutments 36b and 38b formed by the raised shoulders.

15 In addition, support arms 14 and 16 may include U-shaped recessed portions 40 and 42 for suspending, for example, skirt loops, straps, shoulder straps, or the like. Recessed portions 40 and 42 are provided at the juncture of upper portion 14a and 16a of arms 14 and 16 and shoulders 36 and 38. However, it can be appreciated that recessed portions 40 and 42 may be located in shoulder portions 36 or 38 or in upper portions 14a and
20 16a of arms 14 and 16.

Referring to FIG. 9, the numeral 110 generally designates another embodiment of the garment hanger of the present invention. Hanger 110 includes a hook portion 112 and a pair of outwardly extending arms 114, which are of similar construction to arms 14 and 16 of the previous embodiment. Arms 114 and 116 extend outwardly from hook portion and are
25 interconnected at their distal ends by crossbar 118 and are further interconnected at their proximal portions by a second crossbar 119. Crossbar 118 provides a similar function to support bar 18 and provides a support surface for draped garments, such as trousers, ties, or other garments that can be folded. Crossbar 119 may also provide a support surface for ties or belts or the like and further provides reinforcement to the proximal portions of arms 114
30 and 116 and also to hook portion 112.

Similar to the previous embodiment, hook portion 112 is adapted to releasably engage a support bar, and is especially suited for releasably engaging a flat or plate-like support bar. Hook portion 112 includes an inverted U-shaped portion 120 that includes a first

downwardly depending leg 121 and a second downwardly depending leg 122, which is spaced from leg 121 and has a curved configuration to form a narrowed open side 123 for receiving their respective support bar. In this manner, when hook portion 112 is urged into engagement with the respective support bar, arm 122 will deflect to permit the support bar to

5 move and pass into the inner portion or open space 124 of hook portion 112, with arm 122 optionally generating a spring force to clamp onto the respective support bar. Where the height of the support bar is sufficient to clear the innermost surface or point 122a of arm 122, arm 122 will return to its rested position to thereby releasably mount hanger 110 on the support bar, similar to the previous embodiment.

10 Also similar to the previous embodiment, hanger 110 is formed from a wire member 134 that is bent or otherwise formed into the shape of hanger 110. In the illustrated embodiment, wire member 134 has a circular cross-section; however, it can be appreciated that wire member 134 may have a different cross-section or a variable cross-section. In addition, similar to the previous embodiment, wire member 134 preferably comprises a

15 relatively rigid material, such as plastic, metal, or the like.

While several forms of the invention have been shown and described, other forms will now become apparent to those skilled in the art. Therefore, it will be understood that the embodiments shown in the drawings and described above are merely for illustrative purposes, and are not intended to limit the scope of the invention, which is defined by the

20 claims that follow as interpreted under the principles of patent law including the doctrine of equivalents.